

Advanced Interventional Radiology Coding

Audio Seminar
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Practical Tools for Seminar Learning

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Faculty

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Ms. Broek is a vice president of ZHealth Publishing and ZHealth. Ms. Broek has many years of experience in the specialty area of radiology—including specializing in the area of interventional radiology coding. She began her career as a radiology technician, and is a nationally recognized expert on interventional radiology coding and reimbursement.

David Dunn, MD,

Dr. Dunn is a vice president of ZHealth, overseeing physician coding and managing operations. Prior to joining ZHealth, Dr. Dunn spent over 10 years as an active vascular surgeon in private practice, including endovascular procedures. He is also a diplomat of the American Board of Surgery, and is certified in vascular surgery.

David Zielske, MD,

Dr. Zielske is founder and president of ZHealth Publishing. He has 16 years of experience as an interventional radiology practitioner, including 11 years as a coding reviewer and coding expert for his 21-person radiology practice. He first became involved in CPT coding of interventional radiology procedures in 1992 after convincing his radiology group that the complexity of their procedures coupled with the complexity of CPT component coding was resulting in significant miscoding and lost reimbursement.

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Why Is IR Coding So Complex?

- Complex IR Coding is just that - Complex!
- One-to-Many Relationship of Cases to Codes

The femoral artery was punctured and a sheath placed. Catheter was advanced to the aorta above the stenosis and a guiding angiogram done followed by aortic angioplasty with good result. The catheter was advanced to the left iliac and roadmapping performed to the stenosis. Primary left common iliac stent was placed followed by left superficial femoral artery angioplasty. Post angioplasty angiogram showed good results. A left popliteal angioplasty with then performed, however, a limiting-flow dissection was noted that required stent placement and this was performed. The patient complained of left leg pain. An angiogram was performed showing occlusion of the left trifurcation with embolus. Aortogram shows some clot at the aortic angioplasty. The aorta is stented followed by placement of an infusion catheter to the trifurcation. Thrombolysis was performed for 60 minutes with patency re-established on post thrombolysis angiogram. Angioplasties of the anterior tibial and posterior tibial were done with post angioplasty films showing good results.

23 Codes



36247	35474	75960-59	37201	35470-59
35472	75962	75710	75896	75964
75966	75964	75625	75898	36248
37205-59	35474-59	37206	35470	
75960	37206	75960-59	75964	

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Why Is IR Coding So Complex?

- Continuous changes in coding rules and regulations
 - ♦ CCI & Service Unit Edits
 - ♦ CMS / LCD Revisions
 - ♦ HCPCS Level 2 Codes
 - ✓ G0275 (Non-Selective Renal Angiography w/ Heart Cath)
 - ✓ G0290 (Drug Eluting Stents)
 - ✓ G0300 (Revisions in Defibrillators)
 - ♦ Category 3 Codes
 - ✓ 0005T (Carotid Stenting)

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Breakdowns in IR Coding

- ♦ Reliance on CDM and Charging to Code
 - ✓ Multiple Points of Accountability
 - ✓ Work Processes Not Tied to Documentation
 - ✓ Data Flow/System Mapping Issues
 - ✓ Multiple Service Locations
 - ✓ Limited Resources for Coding Information

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Physician Documentation Issues

- ♦ Aorta with runoffs
 - Catheter position
 - Location for angiography
- ♦ Suboptimal angioplasty
 - Locations of lesions
- ♦ Contrast with tube changes
- ♦ Follow-up angiography after embotherapy
- ♦ US documentation with vascular access procedures



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Central Catheters

Groupings

- ♦ **By Age**
 - Under age 5
 - 5 years or older
- ♦ **By Access**
 - Centrally inserted
 - Peripherally inserted

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Central Catheters

Groupings

- ♦ **By Type of catheter**
 - Tunneled with port
 - Tunneled with two catheters
 - With pump or port
 - Without pump or port
 - Tunneled with pump
 - Tunneled without port or pump
 - PICC

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Central Catheters

New Designations

- ♦ **Insertion**
- ♦ **Repair**
- ♦ **Partial Replacement**
- ♦ **Complete Replacement**
- ♦ **Removal**

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Central Catheters

New Centrally Inserted Catheter

- ♦ 36555 Non tunneled under 5
- ♦ **36556 Non tunneled 5+**
- ♦ 36557 Tunneled without port or pump under 5
- ♦ **36558 Tunneled without port or pump 5+**
- ♦ 36560 Tunneled with port under 5

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Central Catheters

New Centrally Inserted Catheter

- ♦ **36561 Tunneled with port 5+**
- ♦ **36563 Tunneled with pump**
- ♦ **36565 Tunneled with 2 catheters without port or pump (Tesio type)**
- ♦ **36566 Tunneled with 2 catheters with port or pump (Lifesite type)**

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Central Catheters

New Peripherally Inserted Catheter

- ♦ **36568 PICC without port or pump under 5**
- ♦ **36569 PICC without port or pump 5+**
- ♦ **36570 With port under 5**
- ♦ **36571 With port 5+**

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Central Catheters

Repair Central or Peripherally Inserted

- ♦ **36575 Tunneled or non-tunneled without port or pump**
- ♦ **36576 Tunneled or non-tunneled with port or pump**
- ♦ **Code twice for twin devices when both catheters are repaired**

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Central Catheters

Partial Replacement Central or Peripherally Inserted

- **36578 Replace catheter only of CVC that has a port or pump**

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Central Catheters

Complete Replacement Through Same Access Site

- **36580 Non-tunneled centrally inserted without port or pump**
- **36581 Tunneled centrally inserted without port or pump**
- **36582 Tunneled centrally inserted with port**

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Central Catheters

Complete Replacement Through Same Access Site

- **36583 Tunneled centrally inserted with pump**
- **36584 Peripherally inserted CVC without port or pump**
- **36585 Peripherally inserted CVC with port or pump**
- **Code a new tunneled placement when permanent catheter is replaced over a wire and the non-tunneled catheter is removed (36558)**

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Central Catheters

Removal of Device

- ♦ **36589 Tunneled without port or pump**
- ♦ **36590 Tunneled with port or pump**
- ♦ **Code twice when both portions of twin devices are removed**

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Mechanical Removal of Obstructive Material

- ♦ **36595 Via separate access**
- ♦ **36596 Through device lumen**
- ♦ **75901 Via separate access S&I**
- ♦ **75902 Through device lumen S&I**

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Other

- ♦ **36597 Repositioning under fluoro guidance**
- ♦ **76000 Fluoro guidance**

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Guidance

75998 Fluoro guidance for placement or replacement S&I includes:

- **Vascular access**
- **Catheter manipulation**
- **Contrast injections through access site or catheter**
- **Catheter tip location/confirmation**

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Guidance

75998 Fluoro guidance for placement or replacement S&I

- Do not use 76003 with this code
- Extremity venography through separate venous site may be coded separately, if medically indicated
 - Must have separate interpretation

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Guidance

76937 Ultrasound guidance for placement or replacement S&I: must include these

1. Evaluation of potential access sites
2. Documentation of selected vessel patency
3. Realtime US visualization of vascular needle entry
4. With permanent recording and reporting

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Guidance

76937 Ultrasound guidance for placement or replacement S&I

- Non-invasive vascular diagnostic extremity venous study may be reported separately if performed separate from venous access guidance

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Central Catheter Checks

- ♦ Fluoro with contrast, no vein described (“Fibrin sheathogram”) – 76000
- ♦ Superior vena cavagram – 75827
- ♦ Extremity venography – 75820
- ♦ No injection code is used for these procedures other than extremity venography

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Complex Therapeutic Radiology Coding

Stent Grafts

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Stent Grafts

Surgical Procedure Codes

- ♦ 34800 – Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; using aorto-aortic tube prosthesis
- ♦ 34802 - Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; using modular bifurcated prosthesis (one docking limb) (AneuRx, Gore)

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Stent Grafts

Surgical Procedure Codes

- ♦ 34804 - Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; using unibody bifurcated prosthesis
- ♦ 34808 – Endovascular placement of iliac artery occlusion device

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Stent Grafts

Surgical Procedure Codes

- ♦ 0001T – Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; modular bifurcated prosthesis (Zenith)
- ♦ 34805 - Endovascular repair of infrarenal abdominal aortic aneurysm or dissection; aorto-uni-iliac or aorto-unifemoral prosthesis

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Stent Grafts

Surgical Procedure Codes

- ♦ 34825 – Placement of proximal or distal extension prosthesis for endovascular repair of infrarenal abdominal aortic aneurysm, initial vessel
- ♦ 34826 - Placement of proximal or distal extension prosthesis for endovascular repair of infrarenal abdominal aortic aneurysm, each additional vessel

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Stent Grafts

Surgical Procedure Codes

- ♦ 34812 – Open femoral artery exposure for delivery of aortic endovascular prosthesis, by groin incision, unilateral
- ♦ 34820 – Open iliac artery exposure for delivery of endovascular prosthesis or iliac occlusion during endovascular therapy, by abdominal or retroperitoneal incision, unilateral

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Stent Grafts

Surgical Procedure Codes

- ♦ 34833 - Open iliac artery exposure with creation of conduit for delivery of infrarenal aortic or iliac endovascular prosthesis, by abdominal or retroperitoneal incision, unilateral
- ♦ 34834 - Open brachial artery exposure to assist in the deployment of infrarenal aortic or iliac endovascular prosthesis by arm incision, unilateral

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Stent Grafts

Surgical Procedure Codes

- ♦ 34830 – Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair, tube prosthesis

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Stent Grafts

Surgical Procedure Codes

- ♦ 34831 – Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair, aorto-bi-iliac prosthesis
- ♦ 34832 – Open repair of infrarenal aortic aneurysm or dissection, plus repair of associated arterial trauma, following unsuccessful endovascular repair, aorto-bi-femoral prosthesis

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Stent Grafts

Supervision & Interpretation

- ♦ 75952 – Endovascular repair of infrarenal abdominal aortic aneurysm or dissection
- ♦ 75953 – Placement of proximal or distal extension prosthesis for endovascular repair of infrarenal abdominal aortic aneurysm

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Iliac Stent Grafts

Supervision & Interpretation

- ♦ **75954 Endovascular repair of iliac artery aneurysm, pseudoaneurysm, AV malformation, or trauma, radiologic S&I**
- ♦ **34900 Endovascular graft placement for repair of iliac artery**

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Stent Grafts

- ♦ **Balloon dilation or stents used in the area the stent graft was placed are not separately reportable**
- ♦ **Only code one cuff per vessel treated**

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Stent Grafts

- ◆ Code additional services performed at time of stent graft
 - Renal or visceral angioplasty/stent
 - Iliac angioplasty/stent for dissection
 - (Be careful to use open versus percutaneous codes for angioplasty and stent placement)
 - Embolization of IMA/internal iliacs

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Vertebroplasty

- ◆ Thoracic – CPT 22520
- ◆ Lumbar – CPT 22521
- ◆ Each add T/L – CPT 22522
- ◆ Guidance:
 - Fluoro – 76012 (per vertebral body treated)
 - CT – 76013 (per vertebral body treated)



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Vertebroplasty

- ♦ **Includes**
 - Placement of needle(s)
 - Epidurography
 - Injection of methylmethacrylate
- ♦ **Does not include**
 - Biopsy
 - If a biopsy is performed, do not code imaging guidance as it is included in the vertebroplasty imaging guidance code (76012 and 76013)

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Balloon-Assisted Vertebroplasty (Kyphoplasty)

- ♦ Procedure same as vertebroplasty but with balloon dilation
- ♦ Coding, however, is different
- ♦ Use unlisted code 22899
- ♦ Fluoroscopy is included (check LMRP carefully regarding this)

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Percutaneous Radiofrequency Liver Tumor Ablation

- ♦ CPT 47382 + guidance codes
- ♦ CT-76362, US-76940, MR-76394
- ♦ By laparoscopy – 47370
- ♦ Open procedure - 47380



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Percutaneous Radiofrequency Tumor Ablation

- ♦ Description on existing guidance codes changed in 2004
 - Specific to visceral tissue
 - Bone – 20982
 - Includes CT guidance
- ♦ New code in 2004 for ultrasound guidance for visceral tissue ablation
 - 76940

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Lymphocele Ablation

- ♦ **CPT 49999**
- ♦ **Ablation S&I**
 - **Unlisted**

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Endovenous Ablation

- ♦ **Unlisted code – 37799 for Medicare**
- ♦ **Non-Medicare coding**
 - **S2130 (radio-frequency ablation)**
 - **S2131 (laser ablation)**

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Angioplasty

- ♦ Utilizes a balloon to dilate a narrowed vessel
- ♦ S&I codes
 - Peripheral
 - 75962 – Initial vessel
 - 75964 – Each additional vessel
 - Aorta, Renal or Visceral Artery
 - 75966 – Initial vessel
 - 75968 – Each additional vessel
 - Venous
 - 75978 – Initial and each additional vessel

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Angioplasty

Surgical codes specific to approach and specific artery

- ♦ Percutaneous
 - 35470 - Tibioperoneal trunk and branches
 - 35471 – Renal or visceral artery
 - 35472 – Aorta
 - 35473 – Iliac artery
 - 35474 – Femoral-popliteal artery
 - 35475 - Brachiocephalic trunk or branches

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Angioplasty

Surgical codes specific to approach and specific artery

- ♦ **Open**

35459 - Tibioperoneal trunk and branches

35450 - Renal or visceral artery

35452 – Aorta

35454 - Iliac artery

35456 - Femoral-popliteal artery

35458 - Brachiocephalic trunk or branches

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Angioplasty

Surgical codes specific to approach and specific artery

- **Venous – Use for venous stenosis in dialysis grafts, extremities, central veins and portal veins**

35476 – Percutaneous

35460 – Open

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Angioplasty

- ♦ Use 35475 for carotid angioplasty associated with stent placement
 - Must be part of a Class B – IDE study
 - New studies are opening up for enrollment
- ♦ Use new technology codes for carotid stent placement
 - 0005T – initial stent placement
 - 0006T - each additional stent placement
 - 0007T – stent placement, S&I
 - These codes are to be used for other extracranial vessels (vertebral, common carotid) when done for neurologic indications (per SIR 2004 Cybersession)

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Angioplasty

- ♦ Code 37799 for “laser” peripheral angioplasty
- ♦ Vertebral and intracranial angioplasty is a non-covered service by Medicare at this time
- ♦ Discuss use of an ABN (Advanced Beneficiary Notification) with your Physician and Hospital if considering these procedures

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Angioplasty

- ♦ Angioplasty is per vessel treated, not per stenosis
- ♦ Do not need to be successful to charge for angioplasty (i.e., flow-limiting dissection, rupture, elastic recoil, 30% residual stenosis, 5mm residual gradient, acute occlusion)

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Angioplasty

- ♦ Bill separately for
 - Catheter placement
 - Diagnostic angiography
- ♦ Do not bill separately for
 - “Guiding angiography”
 - “Road mapping”
 - Post angioplasty angiography (unless there is a complication requiring further diagnostic investigation)

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Complex Therapeutic Radiology Coding

Atherectomy

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Atherectomy

- ♦ Utilizes burrs to clean out vascular structures
- ♦ Peripheral Artery S&I codes
 - 75992 – Initial vessel
 - 75993 – Each additional vessel
- ♦ Visceral Artery S&I codes
 - 75995 – Initial vessel
 - 75996 – Each additional vessel
- ♦ No code for venous atherectomy

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Atherectomy

Surgical codes specific to approach and specific artery

- ♦ **Percutaneous**

35495 - Tibioperoneal trunk and branches

35490 - Renal or visceral artery

35491 – Aorta

35492 - Iliac artery

35493 - Femoral-popliteal artery

35494 - Brachiocephalic trunk or branches

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Atherectomy

Surgical codes specific to approach and specific artery

- ♦ **Open**

35485 - Tibioperoneal trunk and branches

35480 – Renal or visceral artery

35481 – Aorta

35482 – Iliac artery

35483 – Femoral-popliteal artery

35484 - Brachiocephalic trunk or branches

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Atherectomy

Bill separately for

- Catheter placement
- Diagnostic angiography

Atherectomy is per vessel treated, not per stenosis

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Complex Therapeutic Radiology Coding

Stent Placement

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Stent Placement

- ♦ **There is one S&I code**
 - **75960 – Transcatheter introduction of stent percutaneous or open, S&I**
- ♦ **The procedure codes are more specific**
 - **Percutaneous**
 - **37205 – stent placement initial vessel**
 - **37206 - stent placement each addtl vessel**

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Stent Placement

- ♦ **Procedure codes**
 - **Open**
 - **37207 – stent placement initial vessel**
 - **37208 – stent placement each addtl vessel**
- ♦ **Codes are for placement in the vascular system only**

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Stent Placement

- ♦ **Bill per vessel treated (not per lesion)**
- ♦ **Use modifiers on multiple vessel stent codes (i.e., 75960-59)**
- ♦ **Currently there is no Medicare coverage for vertebral and cerebral stents**
- ♦ **Bill separately for**
 - catheter placement
 - diagnostic angiography
- ♦ **Do not bill separately for a “guiding” or follow-up angiogram**

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Stent Placement

- ♦ **Angioplasty is not billed separately when**
 - Performed as pre-dilation of a lesion to assist in placement of the stent
 - Performed as part of the stent deployment
 - Performed to model, completely expand or increase the size of the stent

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Stent Placement

- ♦ Angioplasty is billed separately when
 - Performed initially as a primary angioplasty, but with a sub-optimal result (i.e., elastic recoil with 30% residual stenosis, flow-limiting dissection, 5mm residual gradient or acute occlusion)
 - Performed to treat an area of the vessel not treated with the stent
 - Performed to treat a dissection or stent-induced stenosis (i.e., plaque movement over a branch vessel)

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Example 1



Patient with left leg claudication

A right groin puncture is performed. A catheter is advanced into the aorta and an aortogram and bilateral selective renal angiography is performed. The catheter is pulled down to the bifurcation. Contrast is injected and complete bilateral lower extremity angiography is performed. The catheter is advanced to the left common femoral artery and additional lower extremity angiography is performed. Severe stenoses of the proximal left superficial femoral artery and mid-popliteal artery are identified. Angioplasty is performed at both these sites with good results.

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Polling Question 1



1	2	3	4
♦ 36245-59	♦ 36245-59	♦ 36245-5950	♦ 36140-59
♦ 36247LT	♦ 36247LT	♦ 36247LT	♦ 36245-59
♦ 75625	♦ 75625	♦ 75724	♦ 36247LT
♦ 75724	♦ 75724	♦ 75716	♦ 75724
♦ 75716	♦ 75716	♦ 75774LT	♦ 75716
♦ 75774LT	♦ 75774LT	♦ 35474LT	♦ 75774LT
♦ 35474LT	♦ 35474LT	♦ 35474-59LT	♦ 35474LT
♦ 75962LT	♦ 35474-59LT	♦ 75962LT	♦ 35474-59LT
	♦ 75962LT	♦ 75964LT	♦ 75962LT
	♦ 75964LT		♦ 75964LT

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Complex Therapeutic Radiology Coding

Thrombolysis

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Thrombolysis

- ♦ 37201, 75896
- ♦ Add selective catheter placement codes
- ♦ Add diagnostic imaging performed
- ♦ Per surgical site (i.e., right leg, left leg, both legs, right lung, left lung, both lungs)
- ♦ Follow up angiography – 75898 (-59 for each additional)

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Thrombolysis

- ♦ **Exchange of Infusion Catheter During Thrombolysis**
 - 37209, 75900
 - Includes contrast monitoring
 - Follow up angiography – 75898 (-59 for each additional)

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Complex Therapeutic Radiology Coding

Non-Thrombolytic Infusion Therapy

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Non-Thrombolytic Infusion Therapy

- ♦ Papaverine, Chemotherapy, Vasopressin, etc.
- ♦ 37202, 75896
- ♦ Add selective catheter placement codes
- ♦ Add diagnostic imaging performed
- ♦ Follow up angiography – 75898 (-59 for each additional)

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Embolization

- ♦ **Peripheral**
 - 37204, 75894
 - Per surgical site
 - Add selective catheter placement codes
 - Add diagnostic imaging performed
 - Follow up angiography – 75898 (-59 for each additional vessel embolized, use 75898 only once per vessel for completion study)

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Embolization

- ♦ **Head and Neck – Non-central nervous system**
 - 61626, 75894
 - Per surgical site
 - Add selective catheter placement codes
 - Add diagnostic imaging performed
 - Follow up angiography – 75898 (-59 for each additional vessel embolized, use 75898 only once per vessel for completion study only)

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Embolization

- ♦ **Head and Neck – Central nervous system (brain/spinal cord)**
 - 61624, 75894
 - Per surgical site
 - Add selective catheter placement codes
 - Add diagnostic imaging performed
 - Follow up angiography – 75898 (-59 for each additional vessel embolized, use 75898 only once per vessel for completion study)

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Embolization

- ♦ **Carotid Test Occlusion – 61623**
 - **Includes (may not be billed separately)**
 - Selective catheterization of vessel to be occluded
 - Monitoring
 - Balloon inflation
 - **Does not include (may be billed separately)**
 - Selective catheterization and angiography of other arteries
 - Diagnostic angiography of the vessel if performed immediately prior to occlusion

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Example 2



Patient with Uterine fibroids
Physician punctures right groin, puts the catheter in the distal aorta and performs an AP pelvis angiogram. Selective catheterization of the left uterine artery with particle injection. Selective catheterization of the right uterine artery with particle injection until there is stasis of blood flow.

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Polling Question 2



1	2	3	4
♦ 36247-50	♦ 36247-50	♦ 36247-50	♦ 36247-50
♦ 75716	♦ 75716	♦ 75716	♦ 75716
♦ 37204	♦ 37204-50	♦ 37204	♦ 37204
♦ 75894	♦ 75894	♦ 75894	♦ 75894
	♦ 75894-59	♦ 75898	♦ 75898
		♦ 75898-59	

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Example 3



Patient with uterine fibroids.
Physician punctures right groin, puts the catheter in the distal aorta and performs an AP pelvis. Catheter is advanced to the left internal iliac artery with angiography. The catheter is advanced into the uterine artery, past the cervico-vaginal branch, and angiography is performed. Particles are injected. Post embolization filming is performed. The catheter is moved to the right side. Catheter is advanced to the right internal iliac artery with angiography. The catheter is advanced into the uterine artery, past the cervico-vaginal branch, and angiography is performed. Particles are injected. Post embolization filming is performed.

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Polling Question 3



1	2	3	4
♦ 36247-50	♦ 36247-50	♦ 36247-50	♦ 36247-50
♦ 75716	♦ 75630	♦ 75716	♦ 75736RT
♦ 75736RT	♦ 75716	♦ 75736RT	♦ 75736-59LT
♦ 75736-59LT	♦ 75736RT	♦ 75736-59LT	♦ 75774RT
♦ 75774RT	♦ 75736-59LT	♦ 37204	♦ 75774LT
♦ 75774LT	♦ 37204	♦ 75898 x 2	♦ 37204
♦ 37204	♦ 75898 x 2	♦ 75894	♦ 75898 x 2
♦ 75898 x 2	♦ 75894		♦ 75894
♦ 75894			

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TIPS

TIPS Insertion 2003

♦ **37182**

- **Includes**

- Venous access
- Hepatic & portal catheterization
- Portography with hemodynamic evaluation
- Intrahepatic tract formation/dilatation
- Stent placement
- All associated imaging

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TIPS

♦ **Variceal embolization**

- **37204, 75894, 75898**
- **Catheter placement – 36011**

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TIPS

Tips Revision 2003

♦ **37183**

- **Includes**

- Venous access
- Hepatic & portal catheterization
- Portography with hemodynamic evaluation
- Intrahepatic tract formation/dilatation
- Stent placement
- All associated imaging

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Venous Interventions

Dialysis Graft Procedures

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Dialysis Graft Procedures

Diagnostic Shuntogram

- ♦ 75790 - S&I
- ♦ 36145, 36010, 36120 - Access site and catheter tip location

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Dialysis Graft Procedures

Multiple Access Sites

- ♦ 36145
- ♦ 36145-59

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Dialysis Graft Procedures

Percutaneous declot of Graft (any method)

- ♦ **36870 – includes**
 - fogarty catheter
 - thrombectomy catheter
 - thrombolytic therapy
 - thrombolytic brush
 - balloon maceration
 - pull-thru and push-thru

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Dialysis Graft Procedures

Venoplasty

- ♦ **35476, 75978 - initial vessel**
- ♦ **35476-59, 75978-59 – if additional vessel**
- ♦ **The entire graft and upper extremity venous outflow to the level of the axilla is considered one venoplasty per society recommendations.**

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Dialysis Graft Procedures

Angioplasty of Arterial Inflow (or Anastomosis?)

- 35475, 75962
- 35474, 75962
- 35473, 75962
- ♦ Controversy regarding when these codes can be used
- ♦ Do Not Code for both arterial and venous anastomosis angioplasty. The entire graft, both anastomoses and the venous outflow in the extremity to the level of the axilla is considered part of the same vessel so multiple angioplasties or stents in this distribution are not separately coded. Only one procedure of each type may be coded in this anatomic region.

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Dialysis Graft Procedures

- ♦ Use of 37201, 75896

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Question 4



Patient with history of clotted arm graft
Arterial limb puncture of graft with 2mg lyse and wait, followed by venous puncture of the graft, followed by shuntogram, venograms of the arm and superior vena cava. This showed a severe stenosis of the venous anastomosis and two mid arm venous stenoses. Venoplasty of all three areas were performed. A Fogarty balloon is used to pull the plug and the residual clot is pushed into the superior vena cava. Repeat study shows a native brachial artery stenosis 3 cm proximal to the arterial anastomosis. This is treated with angioplasty. This all clots off and using ultrasound guidance, documentation of vessel patency and hard copy imaging, a tunneled permanent dialysis catheter is placed in the jugular vein. The tip is confirmed fluoroscopically to be present in the superior vena cava

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Polling Question 4



1	2	3	4
♦ 36145	♦ 36870	♦ 36870	♦ 36870
♦ 36145-59	♦ 36145	♦ 36145	♦ 36145
♦ 75790	♦ 36145-59	♦ 36145-59	♦ 36145-59
♦ 35476	♦ 75790	♦ 75790	♦ 75790
♦ 75978	♦ 35476	♦ 35476	♦ 35476
♦ 35475	♦ 75978	♦ 75978	♦ 75978
♦ 75962	♦ 35475	♦ 76937-59	♦ 35475
♦ 76937-59	♦ 75962	♦ 36558	♦ 75962
♦ 36558	♦ 76937-59	♦ 75998	♦ 76937-59
	♦ 36558		♦ 36558
			♦ 75998

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Resources

Centers for Medicare and Medicaid Services (CMS)

- National Coverage Determinations (NCDs)

Medicare Fiscal Intermediaries and Carriers

- LMRPs /LCDs

American Medical Association (AMA)

Dr. Z's Coding Guide for Interventional Radiology
(zhealthpublishing.com)

Society of Interventional Radiology (SIR)

American College of Cardiology (ACC)

North American Society of Pacing and Electrophysiology (NASPE)

AHIMA Web-based Coding Assessment and Training
Solutions (CATS) program coding module for the IVR
specialty

http://campus.ahima.org/campus/course_info/CATS/CATS_info.html

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Audience Questions



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Appendix A – Figures

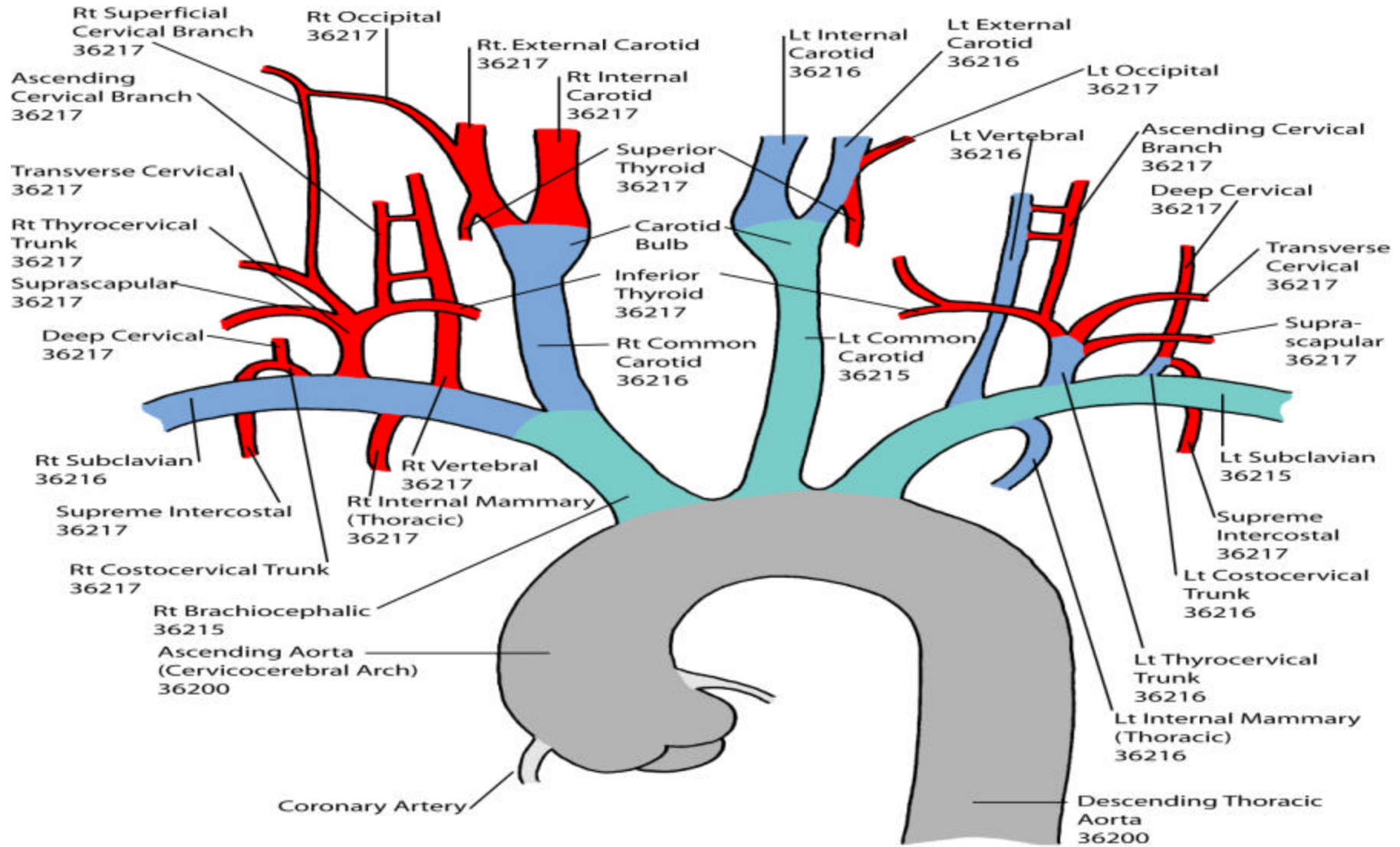


Figure 1

Appendix A – Figures

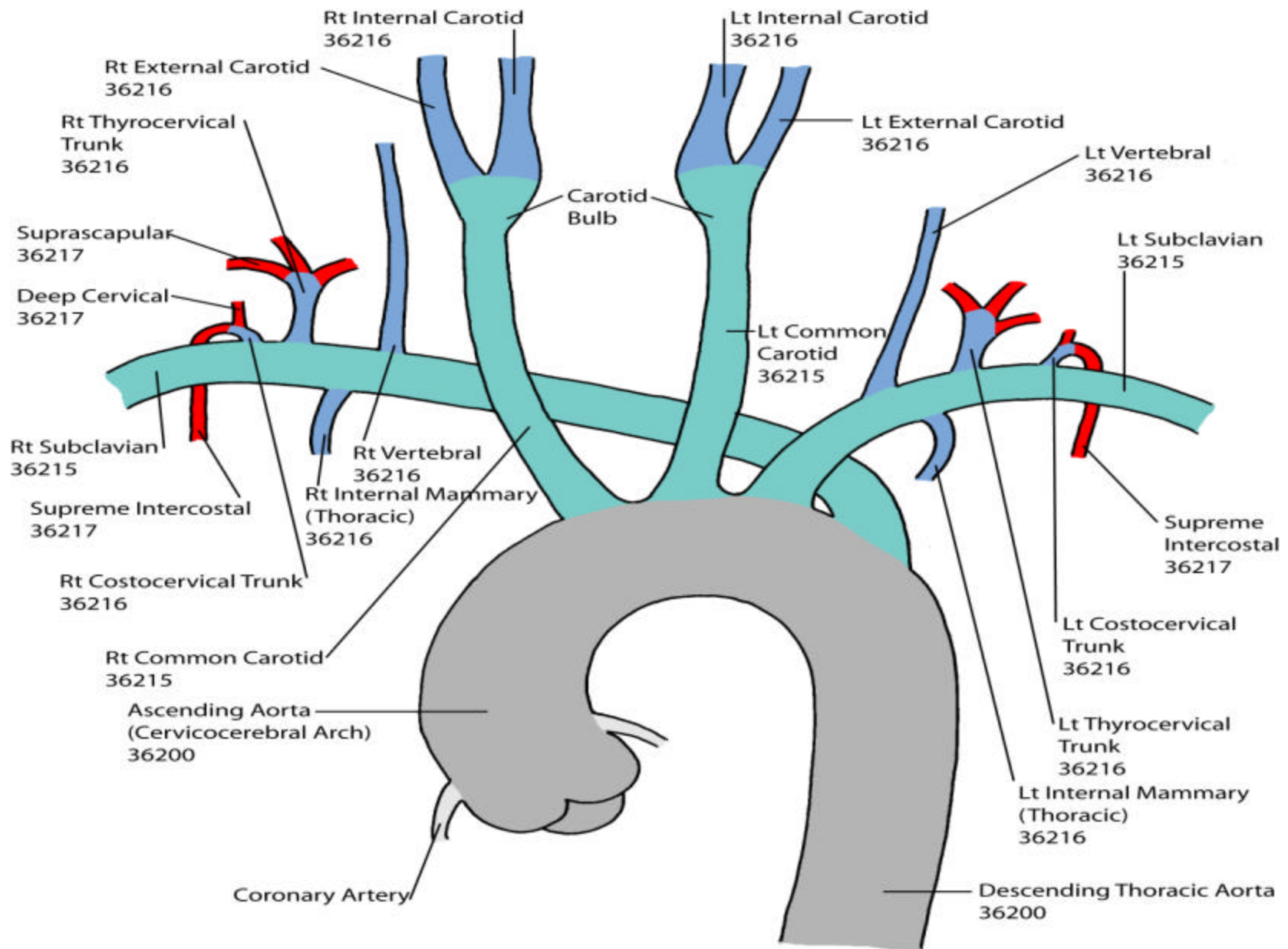


Figure 2

Appendix A – Figures

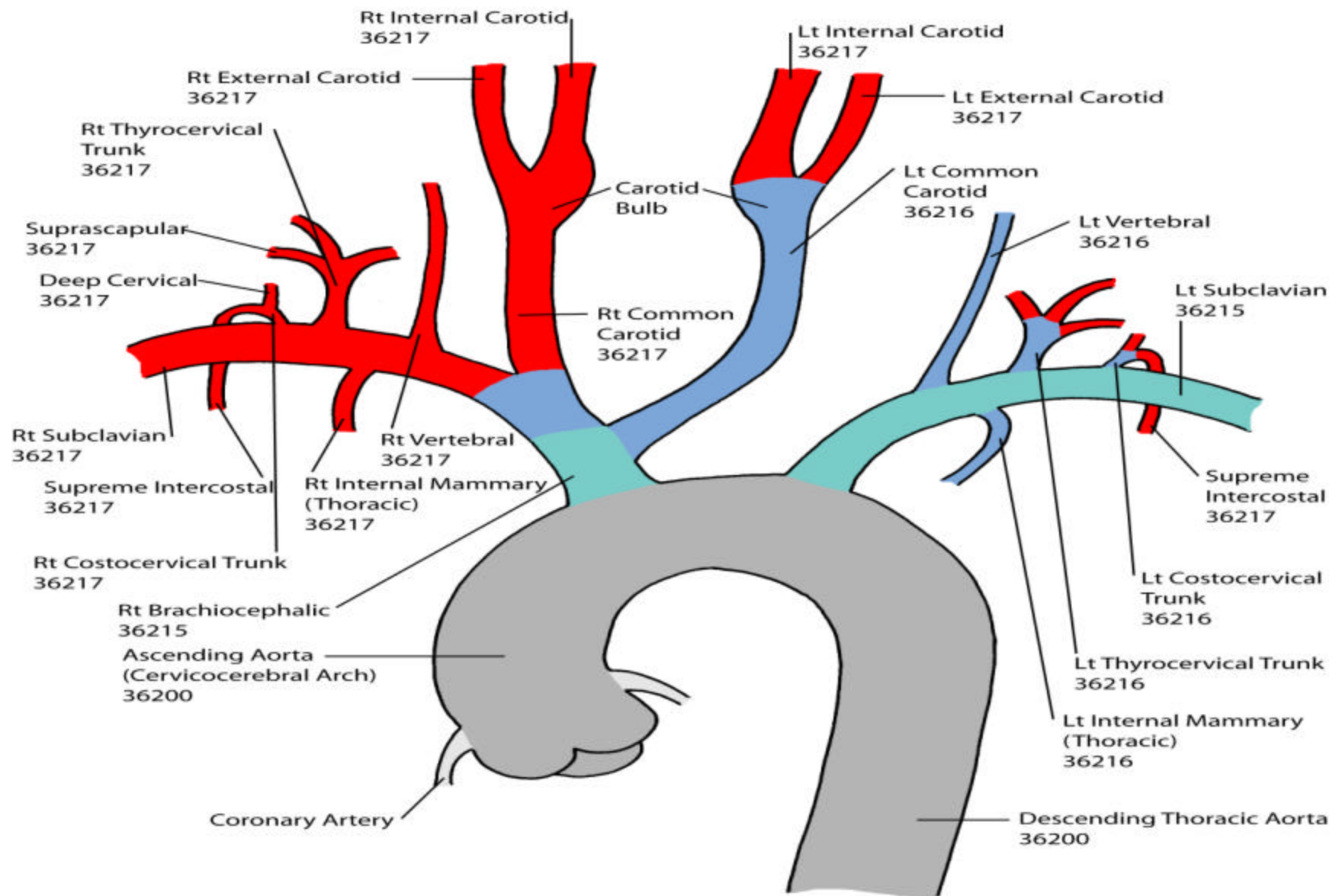


Figure 3

Appendix B – Practice Cases

Case 1

R/O ANEURYSM

RIGHT AND LEFT COMMON CAROTID ARTERIOGRAM AND CEREBRAL ARTERIOGRAM

Indication: History of transient ischemic attacks, intracranial aneurysm.

Impression: 1. Right and left common carotid bifurcations showing no significant stenosis or luminal irregularity. The subclavian arteries are shown patent. 2. There is a slightly lobulated aneurysm of the left middle cerebral artery bifurcation. 3. Prominent junctional dilatation versus bone aneurysm of the origin of the left posterior communicating artery. 4. Normal vertebrobasilar system. 5. No evidence of dural or pial arteriovenous malformation.

APPROACH: The right common femoral artery was accessed with a micro puncture needle set. Using a 5-French catheter, the right and left common carotid arteries, right and left internal carotid arteries, right and left vertebral arteries, innominate artery and left subclavian artery were selectively catheterized. Omnipaque 300 mg% was used for contrast media.

FINDINGS: The left common carotid injection showed no significant stenosis of the left common carotid bifurcation or internal carotid artery. The left internal carotid artery demonstrated the presence of a 4mm x 5mm aneurysm of the left middle cerebral artery bifurcation. The aneurysm is projecting superolaterally. There is also a prominent junctional dilation or an aneurysm of the origin of the left posterior communicating artery. The selective right common carotid injection showed no significant stenosis of the right common carotid bifurcation or right internal carotid artery.

Intracranially, there is good patency of the internal carotid circulation. No aneurysm of the anterior communicating artery or of the right middle cerebral artery bifurcation shown by the study. There is presence of a fetal type of posterior communicating artery, a normal variant. The selective right and left vertebral injection showed no aneurysm of the vertebrobasilar system. The innominate injection showed normal origins of the subclavian artery and of the right common carotid artery. There is tortuosity of the proximal segments of both right and left common carotid arteries. The left subclavian injection shows normal left vertebral artery origin and good patency of the cervical segment of the left vertebral artery.

Case 2

PVD

AORTOGRAM, RUN-OFF ARTERIOGRAM, SELECTIVE ARTERIOGRAM OF THE LEFT LOWER EXTREMITY

DIAGNOSIS: Moderate to severe atherosclerotic changes in the infrarenal portion of the abdominal aorta. Extensive atherosclerotic changes in the common iliac arteries bilaterally with considerable stenosis in both sides. Large area of plaque at the bifurcation of the left common femoral artery. Severe atherosclerosis throughout the superficial femoral arteries with focal occlusion on both sides with collateral reconstitution. Essentially single vessel run-off bilaterally with essentially no significant circulation to the left foot.

APPROACH: Under fluoroscopic control and via a right femoral artery puncture a catheter was advanced into the abdominal aorta and aortogram performed first. Subsequently the catheter was

Appendix B – Practice Cases

brought down to the level of the bifurcation and a run-off study was performed. After this was completed the catheter was moved around the bifurcation and a selective arteriogram of the left foot was obtained.

FINDINGS: The suprarenal abdominal aorta is slightly irregular but essentially normal in caliber. There is considerable atherosclerosis of the infrarenal portion with moderate diffuse narrowing of the caliber and large plaque formation. There is a mild degree of stenosis in the right renal artery. Both common iliac arteries demonstrate extensive atherosclerosis and a large amount of plaque with stenosis in both sides. The stenosis on the right side is more diffuse and on the left side is in the form of a large flat plaque that involves the mid portion of the vessel. The external iliac arteries are essentially normal in caliber and there is a very large amount of plaque at the level of the left common femoral bifurcation producing a significant degree of stenosis. Beyond this point, on the left, there is extensive atherosclerosis throughout the superficial femoral artery that demonstrates multiple focal areas of severe stenosis. A focal area of complete occlusion is noted in the mid thigh and there is prompt collateral reconstitution. The distal portion of the superficial femoral artery and popliteal arteries is moderate irregular. At the level of the trifurcation both the anterior tibial and posterior tibial arteries are completely occluded and only the peroneal artery is patent but this vessel demonstrates extensive areas of stenosis in its proximal portion. Distally in the leg the vessel becomes occluded and there is essentially no circulation visualized in the foot with no reconstitution of any significant vessels in the plantar arches and only minimal reconstitution of the pedis dorsalis and minimal reconstitution of some posterior tibial branches. On the right side there is irregular of the common femoral bifurcation. The superficial femoral artery demonstrates extensive area of stenosis and eventually becomes completely occluded in the distal thigh. There is collateral reconstitution and the distal portion of the vessel is also markedly irregular. The popliteal artery is more normal in caliber. At the level of the trifurcation there is also complete occlusion of the anterior tibial and posterior tibial arteries with only the peroneal artery extending

Case 3

RENAL ARTERIOGRAM

DIAGNOSIS: Mild irregularity in the right common carotid bifurcation otherwise no evidence of stenosis on either side. Normal renal angiogram.

TECHNIQUE: Under fluoroscopic control and via a right femoral artery puncture a catheter was advanced into the abdominal aorta and subsequently into the thoracic aorta. Selective catheterizations of the right and left common carotid arteries and left vertebral arteries were performed and multiple arteriograms obtained. After the selective studies were performed the catheter was exchanged and a thoracic aortogram was obtained. The catheter was pulled down to the L-1 level and aortogram performed. Catheter was exchanged followed by selective bilateral renal arteriography.

FINDINGS:

RIGHT CAROTID ARTERY: The right common carotid artery demonstrates slight irregularity in the distal portion with small amount of plaque formation. With the exception of this, there is no evidence

Appendix B – Practice Cases

of a stenosis and the internal carotid artery is normal in caliber with excellent flow. Intracranially there is a minor degree of atherosclerosis in the middle cerebral artery but otherwise there is excellent flow throughout the brain.

LEFT CAROTID ARTERY: The left common carotid artery bifurcation is slightly tortuous but otherwise unremarkable and the internal and external carotid arteries are completely normal in caliber. The intracranial circulation is also unremarkable on this site except for minor degree of atherosclerosis in the middle cerebral artery.

LEFT VERTEBRAL ARTERY: The left vertebral artery is normal in caliber and there is good flow throughout the basilar artery and posterior fossa with normal circulation and no evidence of stenosis.

THORACIC AORTA: The thoracic aorta demonstrates extensive atherosclerotic changes with marked calcification of the wall of the aorta particularly in the transverse and proximal descending thoracic aorta. The brachiocephalic vessels are tortuous and irregular but there is no evidence of stenosis. Because of the heavy calcification in the proximal descending thoracic aorta, it is difficult to determine if a chronic area of dissection may be present in this region and therefore I would strongly suggest that a high resolution CT of the thoracic aorta be obtained for further evaluation of this area. The renal arteries showed no significant stenosis.

An aneurysm arises from the cavernous portion of the left internal carotid artery.

Moderate stenosis of the right common carotid artery bifurcation.

Moderate stenosis of the cervical portion of the right internal carotid artery secondary to kinking.

Moderate stenosis of the cervical portion of the left internal carotid artery secondary to kinking.

Case 4

HEPATOCELLULAR CA

ABDOMINAL AORTOGRAM, SUPERIOR MESENTERIC ARTERIOGRAM, AND SELECTIVE CELIAC ARTERIOGRAM, AND SELECTIVE COMMON AND PROPER HEPATIC ARTERIOGRAM WITH SUBSELECTIVE VIEWS RIGHT LOBE OF THE LIVER

EMBOLIZATION OF LIVER TUMOR

IMPRESSION:

Esophageal varices with portal hypertension seen.

Hepatocellular carcinoma is seen with displace the vessels around the tumor in the right lobe.

Portal vein is patent.

5-French Simmons I with micro catheter system used to perform the sub selective portion of this procedure successfully.

Successful embolization.

Appendix B – Practice Cases

TECHNIQUES: The right groin was sterilely prepped with DuraPrep and draped. 1% lidocaine was infiltrated to provide local anesthesia. Using a 19-gauge single wall needle, a 0.035 inch guide wire was placed and over that a 5-French sheath. Abdominal aorta performed with a 4-French catheter. This was then exchanged for a 5-French C1, which was used selectively to catheterize the SMA. Superior mesenteric arteriogram was obtained. Following this, the celiac axis was cannulated and views obtained but the hepatic arteries could not be subselected with this catheter. Therefore, the catheter was exchanged over the same wire for a Simmons I Glide catheter and through that catheter, a renegade catheter with a 0.018 guide wire was used to subselect the right hepatic arteries. Contrast was injected and films obtained from this location showed some tumor vascularity. Embolization with embospheres was performed. Follow-up angiogram was obtained.

FINDINGS: There were no complications. Conscious sedation was used. Superior mesenteric arteriogram shows filling of the hepatic artery via pancreaticoduodenal arcade. Portal vein is patent. Coronary vein and other varices are present. Portal vein is patent. Selective views of the hepatic artery obtained. Draping around the tumor is seen by the hepatic arteries. The tumor does not have much large vascularity. I then embolized the tumor with embospheres. Follow-up angiogram showed complete cessation of flow to the tumor.

Case 5

ELEVATED LIVER ENZYMES

SELECTIVE HEPATIC ANGIOGRAM ANGIOGRAM

IMPRESSION: Hepatic angiogram demonstrates irregularity and tortuosity of all hepatic artery branches, consistent with the patient's known liver cirrhosis. There is no evidence of such findings to suggest tumor, new vascularity or hypervascular region to suggest a tumor.

CLINICAL INDICATION: Elevated alpha fetoprotein, suggestive of a hepatic tumor. However, all images including biopsy have been negative.

PROCEDURE: The right groin was prepped and draped in a sterile fashion. A 10 gauge needle was used and the right common femoral artery was punctured. Subsequently a 0.035 wire was advanced. Subsequently, a 5-French vascular sheath was placed. At this time, a 5-French glide Cobra catheter was used and selective catheterization of the common hepatic artery was obtained. Hepatic angiogram was completed in multiple projections. The patient tolerated the procedure. The catheter and vascular sheath were removed. Hemostasis was performed.

FINDINGS: There is tortuosity and irregularity in all branches of the hepatic artery, which is suggestive of liver cirrhosis. This is unchanged from a previous study of April 2002. There is no evidence of such findings to represent a tumor or any other abnormality. There is a TIPS stent.

Case 6

PVD

ABDOMINAL ANGIOGRAM, EXTREMITY ANGIOGRAM, STENT PLACEMENT AND ILIAC ARTERY ANGIOPLASTY AND PTA

INDICATION: Recent heart cath. and run-off showing severe stenosis of the left common iliac artery in a patient with symptoms of left lower extremity claudication with exertion.

Appendix B – Practice Cases

PROCEDURE: Following informed consent, the right and left groins were prepped and draped in the usual fashion. The left common femoral artery was selected for the access. The site was infiltrated with 1% plain Xylocaine as local anesthesia. A 19-gauge single wall puncture needle was advanced under fluoroscopic guidance into the left common femoral artery. A Bentson wire was advanced through the needle into abdominal aorta. A 7-French sheath was exchanged for the needle. A 5F pigtail catheter was deployed over a wire in the distal abdominal aorta and distal abdominal aortic and pelvic angiograms were performed. Following this, a self expanding Nitinol stent was deployed across the stenotic area and iliac artery. The stent measured 40mm in length pre deployment, 9mm internal diameter. The stent was balloon dilated to a width of 8mm using a balloon. At the end of the procedure, the sheath and wire were withdrawn. Local hemostasis was achieved by manual compression. There was a small hematoma.

COMPLICATIONS: A small left groin hematoma, which remains stable.

ANESTHESIA: Local anesthesia 1% Xylocaine. IV Versed and Fentanyl were given for conscious sedation.

FINDINGS: There is atherosclerotic disease involving the distal abdominal aorta of a mild degree. There is bilateral common external and internal iliac artery atherosclerotic disease with multiple areas of luminal irregularity and wall calcification. There is a tight stenosis involving the right internal iliac artery after its origin. There is a severe stenosis involving the mid left common artery. There is an associated plaque involving the left common iliac artery shortly after its origin. Pressure manometry revealed pressure above the lesion in the distal abdominal aorta to be 183/73 and a mean of 119. Below the stenosis, the pressure was approximately 140/70 with a gradient of approximately 40mmHg across the stenosis. Post angioplasty and stenting, the pressure of abdominal aorta above the stenosis was 183/73 with a mean of 119. Below the stent, the pressure was 182/76 and a mean of 116.

Appendix B – Practice Cases

ANSWER KEY

Case 1:

75680, 75671, 75685RT, 75685-59LT, 36217RT, 36218RT, 36216-59LT, 36216-59LT

Case 2:

75625, 75716, 75774, 36245

Case 3:

75724, 75650, 75671, 75680, 75685LT, 36215-59LT, 36216RT, 36216-59LT, 36245-50

Case 4:

75726, 75726-59, 36245-59, 36247, 75774, 37204, 75894, 75898

Case 5:

36246, 75726

Case 6:

37205, 75960, 36200

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June 17, 2004

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